

REMARKS

Claims 14-15 and 54-60 are canceled.

Claims 1-13 and 16-53 are pending.

Because the claims have not been amended, no new matter has been added.

Applicants thank Examiner Cordray for indicating that Claims 4, 7, 31, 38-42, 44-45 and 52 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants respectfully traverse the 35 U.S.C. 103(a) rejection of claims 1-3, 8-11, 13, 17, 19, 21-29, 33, 43, 46 and 48 as being obvious over Plumstead in view of Brown and Shibazaki, because, with respect to using a natural carbonate, such as calcium carbonate, there is no teaching or suggestion to combine the cited references and no expectation of success. Thus, Brown cannot be combined with Plumstead and the combination of Brown and Plumstead therefore does not combine with Shibazaki to suggest the Applicants' invention.

The Office has argued that while Plumstead does not explicitly disclose natural calcium carbonate, Brown fills in this gap with the description that " rhombohedral forms of calcium carbonate have similar bulking properties in paper" (please see the Official Action, page 3, third paragraph) and that "it would have been obvious to one of ordinary skill in the art to expect a bulk-enhancing treatment to natural calcium carbonate would have similar effects on natural calcium carbonate and PCC with the same structural (rhombohedral form)" (please see the Official Action, page 3, third paragraph and page 4, first paragraph).

Shibazaki is described to round out the process by disclosing a dispersant.

Applicants respectfully submit that Brown "teaches away" from using a natural carbonate, such as calcium carbonate as a filler to increase bulk. Brown, at column 3, lines

15-18, describes that “A major limitation of ...rhombohedral precipitated calcium carbonate mineral fillers is that they do not enhance the bulk of a sheet of paper.” Brown further describes, at column 3, lines 34-38 , that the rhombohedral particle shape of naturally ground calcium carbonates ...[results in filler particles]... do not produce much bulk.

Brown clearly and unambiguously describes that natural rhombohedral shaped calcium carbonate is not good for producing bulk. Thus, one of ordinary skill in the art would read Brown and expect:

- 1) that naturally ground calcium carbonates do not produce bulk when added to paper; and would read Plumstead and find
- 2) that Plumstead, while silent as to the shape of the calcium carbonate, does not describe a source of calcium carbonate identical to the present invention.

Why would one of ordinary skill in the art be motivated to take Plumstead's process that requires treatment of a synthetic calcium carbonate (natural calcium carbonate was available at the time of Plumstead's filing but was not used by Plumstead) and feed into it Brown's natural calcium carbonate that, apparently because of its shape, was shown to not increase paper bulk? The answer is that there is no motivation to combine these references, absent hindsight gleaned from the Applicants' invention.

Additionally, even if there were a motivation to combine Plumstead and Brown, there is no expectation of success. Why would one of ordinary skill in the art expect to gain success from taking Brown's natural calcium carbonate shown, apparently because of its shape, to not increase bulk, and plug this non-bulk producing natural calcium carbonate into Plumstead's process that requires synthetic calcium carbonate? Applicants submit that the expectation of success is lacking.

Accordingly, because there is no motivation to combine and no expectation of success, Applicants respectfully request withdrawal of the rejection.

Applicants respectfully traverse the 35 U.S.C. 102(b), or in the alternative, 35 U.S.C. 103(a) rejection of Claims 1-3, 5-6, 8-13, 16-17, 19-25 and 28-29, on the grounds that the references are not combinable and there is no expectation of success in combining the references and the references do not disclose all claim limitations of the instant invention.

Shibazaki II discloses a process that makes two forms of synthetic (i.e., not natural) calcium carbonate from a calcium hydroxide starting material (not a natural calcium carbonate starting material), forms A and B (please see column 2, line 32 through column 3, line 2). Shibazaki II does not start from natural calcium carbonate, even though natural calcium carbonate was commercially available at the time of Shibazaki II's invention. Applicants respectfully note that Shibazaki II describes, at column 2, lines 34-35, "spraying an aqueous suspension of calcium hydroxide" and does not describe "treating an aqueous suspension or calcium hydroxide" as described in the Official Action at page 4.

As previously discussed, Brown "teaches away" from using natural calcium carbonate as a filler to increase bulk. Brown, at column 3, lines 15-18, describes that "A major limitation of ...rhombohedral precipitated calcium carbonate mineral fillers is that they do not enhance the bulk of a sheet of paper." Brown further describes, at column 3, lines 34-38, that the rhombohedral particle shape of naturally ground calcium carbonates ...[results in filler particles]... do not produce much bulk.

Brown clearly and unambiguously describes that natural rhombohedral shaped calcium carbonate is not good for producing bulk. Thus, why would one of ordinary skill in the art be motivated to use natural calcium carbonate, which is not good for producing bulk, as a starting material in a process that requires calcium hydroxide as starting material? Applicants respectfully submit the references are not combinable and do not teach or suggest the instant invention.

Further, there is no expectation of success, even if the references were combinable. Why insert a material (natural calcium carbonate) described as not producing bulk in paper into a process that employs calcium hydroxide as a starting material to make modified calcium carbonates? As Shibazaki II does not make up for the shortcomings of Brown, and Shibazaki is described by the Office as teaching only a dispersant, Applicants respectfully submit that the combination of references neither anticipates nor renders obvious the present invention. Withdrawal of the rejection is respectfully requested.

The 35 U.S.C. 103(a) rejection of Claims 20, 30, 32-36, 47, 49-51 and 53 is respectfully traversed. The instant claims require the presence of a natural carbonate starting material. As described in the previous paragraphs of this paper, there is no motivation to combine, nor expectation of success in combining, Plumstead or Shibazaki with Brown. Accordingly, Applicants submit the combination of the references does not describe or suggest the inventive embodiments of the rejected claims. Withdrawal of the rejection is respectfully requested.

Applicants respectfully request withdrawal of the 35 U.S.C. 103(a) rejection of Claims 18 and 37 as being obvious over Plumstead or Shibazaki in view of Strauch. Strauch. Plumstead and Shibazaki require synthetic (i.e., non-natural) calcium carbonate. Strauch describes precipitated commercially prepared calcium carbonate (please see column 2, lines 28-32). None of the references describe starting with the natural calcium carbonate of the Applicants invention. Withdrawal of the rejection is requested.

Applicants submit the present application is now in condition for allowance. Early notification to this effect is earnestly solicited.

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Respectfully submitted,

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